DISLOCATION AT THE SHOULDER COMPLICATED BY FRACTURE THROUGH THE ANATOMICAL NECK OF THE HUMERUS.

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C. E. E., aged thirty-four years. On the 18th of July, 1899, at Jamestown, Cal., the patient, who is a physician, was thrown violently from his buggy in a runaway, the vehicle colliding with an electric-light post and the patient falling heavily on his left hand, the palm of which was badly scraped.

On examination by a local surgeon a dislocation of the left shoulder was found and reduced under chloroform; the arm was placed in the usual bandage. There was, however, a continuous pain the entire length of the arm, more at the lower part of the deltoid muscle, though not infrequently a sharp pain extended to the tips of the fingers. The lower part of the deltoid was quite painful to the slightest touch; elevation of the arm unassisted was impossible.

The condition of continuous pain and disability induced the patient to seek further advice, and he came to me in the early part of December, nearly five months after the accident.

Externally, the left shoulder presented a depression of three-quarters of an inch in width and two and a half in length just below the acromion. On rotating the arm, the head of the bone was apparently felt in the glenoid cavity, and on pushing the humerus upward and outward the roundness of either shoulder was nearly the same; with the finger in the axilla a bone representing a part of a sphere could be felt, not loose, but connected with the humerus near the inner tuberosity; this bone moved with the humerus on rotation. The amount of shortening was one inch.

The diagnosis was a fracture of the anatomical neck of the humerus. In the efforts of reduction the broken piece of bone had become detached after the dislocation and left outside the capsule in the axilla. The pressure of the bone in its new position was a source of irritation to the circumflex and musculo-spiral nerves, and accounted for the pain in the lower part of the deltoid as well as in the entire limb. The radiograph confirmed the diagnosis.

The removal of the bone from the axilla was advised, and on the twelfth of December, at St. Luke's Hospital, an incision of four inches was made along the inner border of the pectoralis major; after the division of the axillary fascia the bone was felt and brought nearer the surface by abducting the arm; care was taken not to divide or injure any nerves; but one vein of medium size was tied and divided. A flat periostome carefully separated the neck of bone which united the head with the humerus; it was impossible to find the exact point of union on examining the fractured bone after removal, so evenly rough was the surface; it was the length of the index-finger from the incision, that is, about three inches deep. The wound was sutured and a drainage-tube placed.

The recovery was rapid; after a few days the drainage-tube was removed and a fresh dressing applied; there was an oozing of a yellowish fluid, probably synovial, for a week longer, when the wound healed.

The patient returned home on the twenty-first of December; the immediate cessation of pain in the arm, which had been continuous for five months, was the most notable result of the operation. The ability to raise the arm was in a great measure restored.

The patient writes, January 12, 1900, "For the last ten days I have not experienced any pain whatever; the limits of motion are very much more than before the operation, and the manipulation of the arm does not cause pain as before. I can also sleep on the side without any inconvenience, which I could not do before. I feel satisfied that I shall get at least 75 per cent. of the normal function of the arm."

I have not been able to find the history of a parallel case in any of the surgical works at my disposal. Follin, in speaking of fractures of the anatomical neck of the humerus, says, "Sometimes the head after being broken off is thrown outside into the axilla through the capsule." ("Traité de Pathologie Externe," Vol. iii, p. 865.) He does not refer, however, to any particular case.

It is interesting to note how the fractured bone survived for so long a period in the axilla with the slight connection it had with the main shaft.

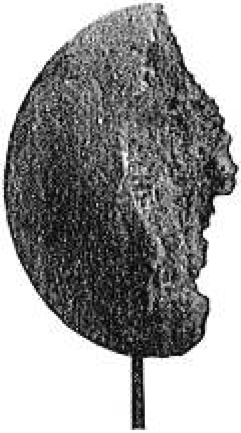

FIG. 2.—The fragment removed.

The radiograph shows the fractured head of the humerus below the glenoid cavity. The rounded portion of bone at the tuberosities and under the acromion shows the efforts nature has made to restore a useful joint. The photographs of the head of the humerus speak for themselves; they are the exact size of the original.

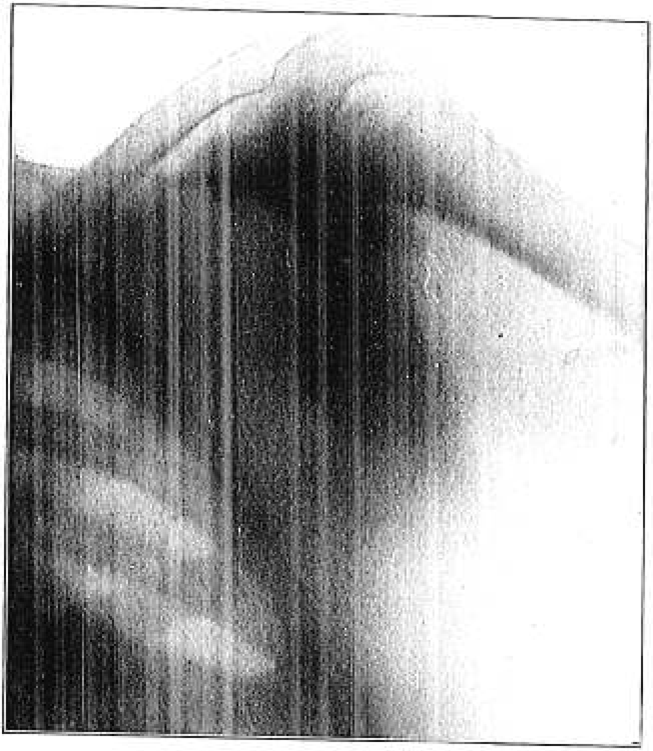

FIG. 1.—Fracture through the anatomical neck of the humerus, with displacement of fragment down into axilla.